

ABSTRACT OF THE DISCLOSURE

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The semiconductor manufacturing apparatus of the present invention, is composed of a vacuum vessel, wherein at least one substrate stage is provided on the vacuum vessel bottom plate; a cylinder is installed surrounding the substrate stage, and the gap created between the cylinder and the vacuum vessel top plate or bottom plate is made variable by lifting/lowering the cylinder. At least one cylinder lifting/lowering mechanism per each cylinder is provided, in order to separate a space inside the cylinder composing a processing chamber for processing a substrate surface from a space outside the cylinder comprising a transport chamber for transferring the substrate. The transport chamber is provided with a substrate conveyer mechanism for transferring the substrate between the processing chamber and the transport chamber through the gap. The processing chamber is provided with a processing chamber gas inlet and a processing chamber gas outlet while the transport chamber is provided with a transport chamber gas inlet and a transport chamber gas outlet.

Abstract

The present invention relates to a semiconductor manufacturing apparatus, capable of uniform processing on the substrate, occupying a small floor area for installation, and presenting a good maintainability.

The semiconductor manufacturing apparatus of the present invention, is composed of a vacuum vessel, wherein at least one substrate stage is provided on said vacuum vessel bottom plate; a cylinder is installed surrounding said substrate stage; the gap between said cylinder and said vacuum vessel top plate or bottom plate is made variable by lifting/lowering said cylinder; at least one cylinder lifting/lowering mechanism per one said cylinder is provided, in order to separate a space inside said cylinder composing a processing chamber for processing said substrate surface from a space outside said cylinder composing a transport chamber for transferring said substrate; said transport chamber is provided with a substrate conveyer mechanism for transferring said substrate between said processing chamber and said transport chamber through said gap; said processing chamber is provided with a processing chamber gas inlet and a processing chamber gas outlet; and said transport chamber is provided with a transport chamber gas inlet and a transport chamber gas outlet.